A very faint, large watermark-like image of a classical building with four prominent columns and a triangular pediment occupies the background of the page.

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GROWING CARAGANA FOR FIELD SHELTERS AND HEDGES

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There are several species of caragana hardy in the West, but the one commonly found and used very widely for hedge purposes is the *Caragana arborescens*, introduced from Siberia. Though it cannot be classed as a tree, the caragana is so hardy and vigorous, and adapts itself to such varied conditions of soils that it must be considered as a most valuable plant for shelter purposes. When left to grow naturally it will attain a height of 18 to 20 feet.



Caragana field shelter, about six years old. This hedge is a mile long and about six feet high. Since it was from four feet high it has materially affected the yield of grain in this field, and on one occasion since (in 1931) it saved the field from a total loss.

USE FOR FIELD SHELTERS.—Soil drifting is now becoming a very acute problem on many prairie farms. The caragana is admirably suited, owing to its extreme hardiness, density of growth and ability to withstand long periods of drought, for the purpose of forming windbreaks for crop protection. The use of such windbreaks in combination with a system of strip farming, and where practical the introduction of grass crops to increase the fibre of the soil, will largely help to solve this problem.

For a start, hedges might be established around the outer edges of the cultivated portions of the farm, with a system of secondary hedges to be established later as time and labour permit. Eventually the crop areas will be divided into fields of various sizes, say 40 to 80 acres, laid out in such a way as not to interfere unduly with the use of the usual farm machinery or the general methods of crop rotation.

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For the establishment of field shelters, the planting of seedlings will in most cases produce best results, although hedges can be easily started from seed providing the ground is finely worked and free of weed seeds. The average run of crop land is generally rather weedy, and there is in such cases a danger of the young seedlings being choked out by a rank weed growth before they can get established. Whether started from seed or seedlings, it is necessary to keep the soil well cultivated on both sides up to three or four years. This can be done quite conveniently with a single horse cultivator. As the hedges develop, the cultivated strip will need to be widened. Farmers who have already successfully established such field shelters use the ordinary broad tooth cultivator or a wide disk, keeping a cultivated strip about a rod wide on either side of the hedge. This of course means that a strip two rods wide through the field cannot be used for growing crops, but this loss is more than made up in almost any season by the increased yields due to a checking of evaporation of soil moisture, and in years where soil drifting is bad, it may mean, as has been already demonstrated in several instances, the production of a fair grain crop as against a total failure.

PROTECT FROM STOCK.—It may be necessary to protect the seedlings when young from stock, but if there is plenty of other feed, horses and cattle if not too numerous will not do any material damage to an established hedge.

COLLECTING SEED.—*Caragana* seed is produced abundantly on plants over four years old. The pods should be picked as soon as the seed has become well filled and is turning a dark colour. The pods should be spread out in a warm, dry place and frequently stirred. As the pods dry they split open and the seed is thrown out. The seed should then be put through hand sieves or run through the ordinary grain fanning mill to separate the pods, leaves, etc. The seed should then be bagged and stored in a dry place. If kept dry, it will retain its vitality for three and sometimes four years.

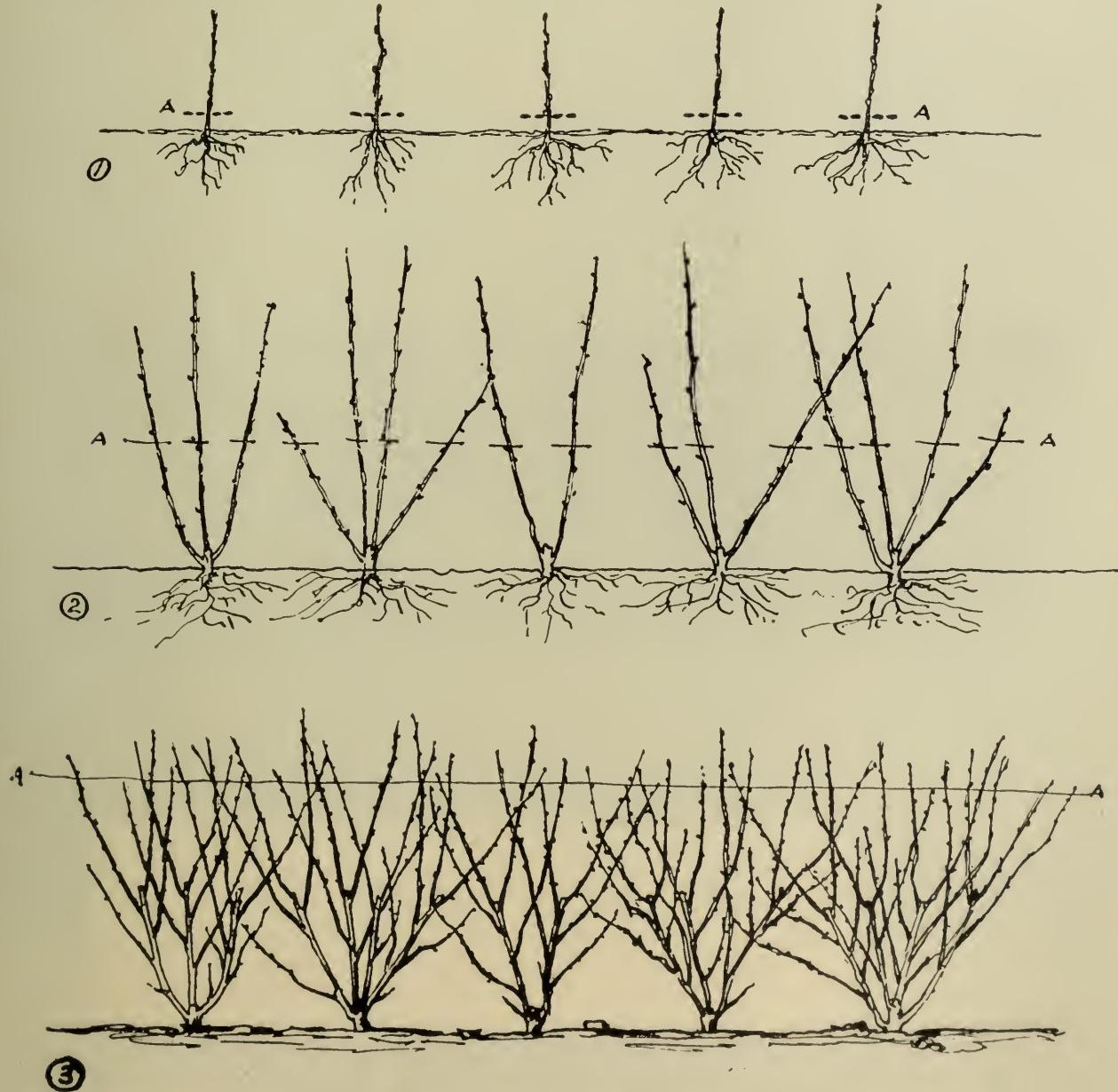


Caragana hedge, about seven years old, grown from seed. The hedge, which is about five feet high, is trimmed every year.

Never sow or plant caragana in a pot hole or low spot where water may lie for a day or two in spring. The plants are sure to die out under such conditions.

GROWING CARAGANA FROM SEED.—Sow in drills just the same as radish or any similar garden seed. The ordinary garden seeder will handle this seed admirably. Sow to a depth of $\frac{3}{4}$ to 1 inch, never more than $1\frac{1}{2}$ inches. Fall-sown seed generally gives the best results put in about October 1 or any time just before freeze-up. If sown in the spring, get the seed in just as early as possible, and if the soil freezes again after sowing, so much the better. Where the seed is to be sown in the permanent hedge site, set the seeder to drop from 12 to 18 seeds to the foot. At this rate, a pound of seed will sow approximately 1,500 feet of drill. To grow a stock of seedlings for transplanting, sow considerably thicker in drills far enough apart to allow of cultivation between the rows. The seedlings should average from 10 inches to 18 inches the first season, which is the best size for hedge planting.

STARTING A HEDGE FROM SEEDLINGS.—If the hedge is started from seedlings, the plants, preferably one year old, should be spaced about one foot apart in



STARTING OF A CARAGANA HEDGE

- (1) Seedlings just planted, 1 ft. apart, should be cut off at line A.
- (2) The following spring, growth should be cut back to line A.
- (3) The third spring trim back to line A, before the leaves start to grow.

the row. Nothing is gained by spacing them more closely, nor by planting the seedlings in a double row. The principal point to observe in the making of a good hedge is that the plants must be severely cut back in order to get a thick bushy growth from the bottom. Hence the first operation *immediately* after planting should be to cut the tops off to within about an inch of the ground. Each seedling will then send up from two to four shoots instead of growing only a single stem. In the following spring six to ten inches of the previous season's growth should again be cut off. (See illustration on previous page.) After the third season the hedge can be left to grow to the necessary height, when it should be kept properly trimmed once or twice each season.

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